BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Pat YANANTON	Date: September 24, 2008
Serial No.: 10/033,862	Group Art Unit: 3644
Filed: 12/20/2001	Examiner: R. Thomas PRICE
Title: Absorbent Pad for Entrapping Fine and Coarse Particles, Retaining Liquids, and Eliminating Odors	Docket: 1718

CERTIFICATE OF SERVICE

I hereby certify that this correspondence is being deposited (in triplicate) with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, P.O. Box 1450 Alexandria, VA 22313-1450 on 9-24-08 (Date)

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Signature: Terry Lakos
TERRY LAKOS

BRIEF ON APPEAL

Hon. Commissioner of Patents and Trademarks
Alexandria, VA 22313

Dear Board:

This Appeal is based on a non-final rejection of Jul. 10, 2008. Appellant initiates this appeal under 37 C.F.R. § 41.31(a)(1).

REAL PARTY IN INTEREST

The real party in interest of this Appeal is the named, and above captioned, inventor, Patrick Yananton. For purposes of allowing members of the Board to comply with ethics regulations associated with working in matters in which the member must avoid any potential conflict of interest, it is possible during the pendancy of this matter that the following companies may have a licensed interest in the present invention:

The Clorox Company of Oakland, CA (publicly traded under the symbol CLX); and

The Bramton Company of Dallas, TX.

RELATED APPEALS AND INTERFERENCES

There are currently appeals pending in the following related applications that may have a bearing on the Board's decision in this pending appeal: U.S. Serial No. 10/269713; and, U.S. Serial No. 11/169738.

STATUS OF CLAIMS

Claims 1-4, 20, 33, 70 and 92-94 are the claims rejected for purposes of this Appeal. Claims 71, 72, 75, 77, 78, 82-85, 91 and 95 were withdrawn in the office action of July 10, 2008. Claims 7-9, 21-28, 32-35, 37-40, 43-44, 46 and 48-69 were withdrawn previously during prosecution. Claims 5-6, 29-31, 36, 41-42, 45, 47, 73-74, 76, 79-81 and 86-90 were cancelled during prosecution.

STATEMENT OF AMENDMENTS

Appellant filed amendments to claims 1, 2 and 4 after the Jul. 10, 2008 Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER

Briefly described, the present invention is a modern, lightweight ,disposable, highloft nonwoven replacement for solid plastic trays, Astroturf™, carpets and trays used to catch cat litter from feline paws. However, it has also been discovered how to catch and hold actual dry pieces of solid particulates of coarse and fine sized active ingredients such as baking soda, powdered fragrances, powdered superabsorbent polymers, antibacterials, etc. directly onto each synthetic fiber of the highloft nonwoven. These dry chunks of active ingredient are held onto each open nonwoven fiber of the higloft by the use of what we call a 'Cling Agent' which is a chemically inert, tacky adhesive, that always remains sticky and never cures (such as is found in self sealing envelopes and sticky notepads). The appellant used this tack for other uses in his manufacturing process and was told by members of Rohm and Hass and Henkle adhesive scientists that this tack adhesive he was using was chemically inert regarding its ability to enter into any chemical reactions with other materials. This information was meaningful to the appellant who was imbedding particulates of baking soda, super absorbent polymer, and other fine and coarse powdered materials into it. This discovery has major uses for many other categories of products that appellant has filed for with over 20 other copending patent applications.

The present invention uses an open porous, high loft structure that used to *non-electrostatically* capture particulates such as cat litter and other household soils tracked into the home by an animal's paws (or person's shoes). It is formed of a preferably plastic impermeable

bottom layer, and a top layer made of a premanufactured, bonded at the interstices, semi-rigid, high loft, open porous, inert filamentous non-woven class of material. The top layer can also be treated with a sticky cling enhancing substance that coats the fibers of the high-loft structure to which dry pieces of an active ingredient can be applied. The dry powdered active ingredient can be dry solid particulates of super-absorbent polymers, backing soda, anti-microbial or odor-counteractive agents. Cling enhancing substances such as sticky, tackified adhesives can be applied to the open, high-loft, nonwoven top layer so as to enhance particle entrapment by enhancing the cling of the high loft, nonwoven fibers, and spaces of the top non-woven layer. After treatment with the sticky cling-enhancing substance, the top ,open, bonded, inert fiber, highloft layer can also be treated with the above dry particulate, such as super absorbent polymers, baking soda, antimicrobials, and odor-counteractive agents to eliminate odors. This results in an open, highloft nonwoven containing many dry pieces of active ingredient adhering mechanically to each fiber of the open highloft nonwoven layer.

The appellant's two-layered pad includes at least a top, made of a premanufactured, bonded at the interstices, high loft, open porous, inert filamentous non-woven class of material layer and a bottom impervious layer. Figure 1A shows one embodiment of a two layer particle-entrapping pad 10 for fine particles. A bonded high loft non-woven top layer 11 is secured to a plastic liquid impervious bottom layer 13. The top, more dense, bonded, open filamentous layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they mostly either fall to the bottom of the pad 10 or many remain suspended within the matrix of bonded interstices, open porous, filamentous, top layer 11. Figure 1B shows a two layer particle-entrapping pad for coarse particles. A less dense, more open, bonded, high loft non-woven top

layer 11 is secured to a plastic liquid impervious bottom layer 13. Coarse particles 14 are trapped in the more open non-woven layer 11. In the embodiments of either figures 1A or 1B, cling enhancing additives such as tackified adhesives, can increase the holding capacity of the porous, bonded, inert fiber highloft top layer 11. Additionally, deodorants such as dry particulate baking soda can be added or pre-loaded to the, sticky, cling treated top layer 11 or between layers 11 and 13.

For entrapping coarse and fine particles, a variety of inert, bonded, non-absorbing high-loft non-wovens exist which can be used to retain the dry particulate material when the inert, nonabsorbent, fibers of the highloft are previously treated with cling agents such as tackified adhesives. Examples of this bonded, high-loft non-woven materials made of a premanufactured, bonded at the interstices, high loft, open porous, inert filamentous non-woven class of material include polyester, nylon, polypropylene and the like and these can be manufactured in a variety of thicknesses and densities as may be desired by both user or needed for the use. The denier for these materials can range from thick with relatively sparse thread count to thin with very high thread count. During the manufacturing process the fibers are sprayed with a binding agent so as to join the fibers at the points of junction. Union Wadding Inc. in Pawtucket, Rhode Island and Hollinee Filtration (now Ahlstrom Inc.) in Texas, as well as many other non-woven suppliers supply the class of bonded,, open porous highloft non-wovens in all types of lengths, densities, widths etc. with binding agents or tacky materials applied upon request.

For further clarification, the present invention claims the use of a particle entrapment pad comprising *preformed, bonded, high loft, non-absorbent nonwoven* top layer. A nonwoven is cited at http://www.inda.org, a copy of which is attached in the Evidence Appendix. Also, the

Evidence Appendix includes a nonwoven sampler booklet that clearly show a well differentiated porous web structure from all of the rest, but defines the category of Highloft nonwovens as "The webs are formed by isotropic or unidirectional or cross laying techniques. The most common method of bonding is by latex spraying or most recently thermal bonding" This booklet is entered as evidence in that section.

Nowovens have technical definitions by various organizations. ASTM defines a nonwoven as a "a textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical or solvent means and combinations thereof..." Note that the term does **not** include paper, or fabrics that are woven, knitted , tufted, or those made by wool or other felting processes. ASTM D123, D-13 (1970). Further, INDA offers a more current, revised definition: "Nonwoven fabrics are generally defined as sheet or web structures made by bonding and or interlocking fibers, yarns or filaments by mechanical, thermal, chemical or solvent means." The European trade association EDANA has a concurrent definition that includes additional limitations, namely,

> "Nonwovens are distinguished from paper, notably by the bulk and rupture energy criteria as outlined as follows (in order of ease of control). A. if it is made of 100% manmade fibers, or then b. if its bulk index is above 7 or if its total rupture energy index is higher than 7 joules or then c. if together its total rupture index is between 7 and 1.2 joules AND its bulk index between 7 and 2."

See also INDA trade association, the trade association of the nonwoven fabrics industry, at www.inda.org, and specifically, http://www.inda.org/category/nwn_index.html.

In the trade, 'nonwovens' have a particular technical meaning that excludes carpet or anything that requires the converting of fibers to yarn, etc. For example, Ahlstrom Air Media is

a current supplier and manufacturer of bonded 'hi-loft nonwovens and needlepunch medias for a variety of applications', by their own description. Ahlstrom Air Media is the current successor in interest to the company formerly known as HOLINEE as referenced in the original application at page 10, lines 18-19. Appellant need only request a HIGHLOFT NONWOVEN from any nonwovens company and they immediately know characteristics of that class of nonwovens being requested. Only the density, color, length, width, height, sometimes binder and other minor physical characteristics then need to be requested.

Mapping of Independent and Dependent Claims:

1. A nonabsorbent particle entrapment pad comprising:

a bonded high loft, non-absorbent nonwoven top layer, said high loft nonwoven being defined as an open pore matrix or web of fibers attached to a barrier bottom layer;	A high loft non-woven top layer 11 is secured to a plastic liquid impervious bottom layer 13 (Pg. 7, ll. 3-4); The structure preferably includes a plastic impermeable bottom layer and a top layer made of a premanufactured, bonded at the interstices, semi-rigid, high loft, open porous, inert filamentous non-woven class of material (Pg. 5, paragraph 3, Specification Amendment 10/29/2007).

wherein said bonded high loft nonwoven top layer is adapted such that the internal pores, and interstices, when receives collected externally applied fine to coarse solid particles the web of fibers thereby entraps, and retains collected particles, said base barrier bottom layer maintains said collected particles with said entrapment pad.	Top layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they either fall to the bottom of the pad 10 or remain suspended within top layer 11 (Pg. 7, ll. 4-6); Coarse particles 14 are trapped in the non-woven layer 11 (Pg. 7, ll. 8-9); Top, more dense bonded, open filamentous layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they mostly either fall to the bottom of the pad 10 or remain suspended within the matrix of bonded interstices, open porous, filamentous, top layer 1 (Pg. 7, paragraph 1, 10/19/2007 Specification Amendment).

71. A particle entrapment pad comprising:

a high loft, non absorbent nonwoven top layer treated with a cling enhancing substance to receive and trap particles,	Cling enhancing substances such as sticky, tackified adhesives, or static substances can be added to the top layer so as to enhance particle entrapment by enhancing the cling of the captured particle to the top non-woven (Pg. 5, paragraph 3, 10/29/2007 Specification Amendment);

said high loft nonwoven being defined as a matrix formed of fibers or filaments randomly oriented and fused at intersecting points of said fibers or filaments and secured to an impervious bottom layer to maintain said particles within said entrapment pad,	The structure preferably includes a plastic impermeable bottom layer and a top layer made of a premanufactured, bonded at the interstices, semi-rigid, high loft, open porous, inert filamentous non-woven class of material (Pg. 5, paragraph 3, Specification Amendment 10/29/2007); Top layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they either fall to the bottom of the pad 10 or remain suspended within top layer 11 (Pg. 7, ll. 4-6); Coarse particles 14 are trapped in the non-woven layer 11 (Pg. 7, ll. 8-9);
wherein said high loft non-woven top layer receives and entraps particles and said bottom layer is impervious to said particles.	Top layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they either fall to the bottom of the pad 10 or remain suspended within top layer 11 (Pg. 7, ll. 4-6);

75. A particle entrapment pad comprising:

a high loft, non-woven top layer, said high loft non-woven being defined as a matrix formed of synthetic fibers or filaments randomly oriented and fused at intersecting points of said fibers or filaments, forming an open porous structural web or matrix, capable to receive and trap particles and secured to a bottom layer to maintain said particles within said entrapment pad;	A high loft non-woven top layer 11 is secured to a plastic liquid impervious bottom layer 13. Top layer 11 traps fine particles 12. Once the particles 12 are trapped within the non-woven, they either fall to the bottom of the pad 10 or remain suspended within top layer 11 (Pg. 7, ll. 3-6); The structure preferably includes a plastic impermeable bottom layer and a top layer made of a premanufactured, bonded at the interstices, semi-rigid, high loft, open porous, inert filamentous non-woven class of material (Pg. 5, paragraph 3, Specification Amendment 10/29/2007).
said top layer being treated with a cling enhancing substance applied or placed within the web; and,	Cling enhancing substances such as sticky, tackified adhesives, or static substances can be added to the top layer so as to enhance particle entrapment by enhancing the cling of the captured particle to the top non-woven (Pg. 5, paragraph 3, 10/29/2007 Specification Amendment); cling enhancing additives such as tackified adhesives, can increase the holding capacity of the porous, bonded, inert fiber highloft top layer 11 (Pg. 7, Paragraph 1, 10/29/2007 Specification Amendment).
said high loft nonwoven top layer is treated with at least one additional dry, solid particulate, agent.	either layer or the interface, also can be treated with the above dry particulate Super absorbent polymers, baking soda, antimicrobials, and odor-counteractive agents as used in the middle layer (Pg. 5, paragraph 3, 10/29/2007 Specification Amendment).

82.

A particle entrapment pad comprising an impervious bottom layer and a high loft non-woven top layer, wherein said high loft non-woven top layer includes a cling enhancing substance within a matrix of said non-woven that is sticky and can cling to dry particulates without entering into chemical reaction with those particulates and is chemically inert while clinging to the particulates.	A high loft non-woven top layer 11 is secured to a plastic liquid impervious bottom layer 13 (Pg. 7, ll. 3-4); Cling enhancing substances such as sticky, tackified adhesives, or static substances can be added to the top layer so as to enhance particle entrapment by enhancing the cling of the captured particle to the top non-woven (Pg. 5, paragraph 3, 10/29/2007 Specification Amendment); cling enhancing additives such as tackified adhesives, can increase the holding capacity of the porous, bonded, inert fiber highloft top layer 11 (Pg. 7, Paragraph 1, 10/29/2007 Specification Amendment).

91. An absorbent particle entrapment pad comprising:

a high loft, non-absorbent nonwoven top layer, said high loft nonwoven being defined as an open pore matrix or web of fibers attached to an impervious bottom layer; and	A high loft non-woven top layer 11 is secured to a plastic liquid impervious bottom layer 13 (Pg. 7, ll. 3-4); The structure preferably includes a plastic impermeable bottom layer and a top layer made of a premanufactured, bonded at the interstices, semi-rigid, high loft, open porous, inert filamentous non-woven class of material (Pg. 5, paragraph 3, Specification Amendment 10/29/2007).

a cling enhancing substance applied to a portion of said fibers; and	Cling enhancing substances such as sticky, tackified adhesives, or static substances can be added to the top layer so as to enhance particle entrapment by enhancing the cling of the captured particle to the top non-woven (Pg. 5, paragraph 3, 10/29/2007 Specification Amendment); cling enhancing additives such as tackified adhesives, can increase the holding capacity of the porous, bonded, inert fiber highloft top layer 11 (Pg. 7, Paragraph 1, 10/29/2007 Specification Amendment).
superabsorbent polymer affixed to said cling enhancing substance; wherein said superabsorbent polymer clinging to said fibers allow said non-absorbent nonwoven top layer to emulate absorbency when wetted.	For entrapping coarse and fine particles, a variety of inert, bonded, non-absorbing high-loft non-wovens exists which can be used to retain the dry particulate, super absorbing polymer water absorbing material when the inert, nonabsorbent, fibers of the highloft are previously treated with cling agents such as tackified adhesives (Pg. 10, paragraph 2, 10/29/2007 Specification Amendment).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The art Examiner relies upon the following reference for a basis of 35 U.S.C. § 102(b) rejections:

U.S. Pat. No. 5,956,798 to Nemoto *et al.* titled "Mat for Removing Dirts or Dusts" discloses, describes, and claims a multilayer mat having (1) a top layer of electrically conductive elastomeric filaments, and (2) a collector sheet (consisting of two layers of flat nonwoven) described as an electret laying under the filamentous material ; and (3) a base lower cushioning material formed of thick rubber so as to retain all generated static charges..

In the Jul. 10, 2008 Non-Final Office, Examiner rejected Claims 1-4, 20, 33, 70 and 92-94 under 35 U.S.C. § 102(b) as being anticipated by Nemoto.

ARGUMENT

1. Claim Rejections - 35 USC § 102

Claims 1-4, 20, 33, 70 and 92-94 stand rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. No. 5,959,798 to Nemoto *et al.*

Nemoto teaches a top collector sheet 2 having an upper non-woven layer 2*a* of very large, electrically conductive filaments of polypropylene fiber ultrasonic welded to a lower non-woven of nylon fiber. A cushion 1 of filaments comprising a mixture of synthetic resinous material and powdered electrical conductive material (vinyl chloride and powdered carbon powder) lay over the collector sheet. A rubber base 3 supports the collector sheet and the cushion.

Firstly, Applicant claims a bonded *high-loft* nonwoven (Claim 1) as a top layer whose filaments are coated with a cling enhancing substance (Claim 2) preloaded (Claim 3) with dry reactive particles (Claim 4) that coat each fiber applied to its web matrix. The cling enhancement substance is a sticky (Claim 70, 92-94) residue that mechanically entraps (Claims 92-94) foreign particles or dry powdered active ingredients within the non-woven's web. Nemoto rather teaches a mixture of electrically charged resinous material and powdered electrical conductive filaments applied to its cushion, and not to its nonwoven, so that the four-layered mat can electrostatically entrap foreign particles within the convexed and concaved shapes of the collector sheet.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly described or inherently described, in Nemoto. *Verdegaal Bros. v. Union Oil Co.*

of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The following examples are a list of limitations that distinguish the present invention over Nemoto:

- Applicant claims a bonded highloft nonwoven top layer, while Nemoto fails to teach a high-loft nonwoven top layer altogether;
- Appellant claims a sticky cling enhancement substance added to the outside of each filament, while Nemoto rather teaches an electrostatic mixture of resinous material and powdered electrical conductive forming large vertically stacked filaments;
- Appellant claims its cling enhancement substance applied to the matrix web of its high-loft nonwoven filaments while Nemoto rather claims its electrostatic filaments or cushion which rests over its two nonwoven collector sheet which rests on its cushioned rubber base;
- Appellant claims foreign particles entrapped by means of mechanical entrapment by means of the entrapment in a disposable, high loft nonwoven, while Nemoto claims foreign particles entrapped by means of elastomerical electrically conductive filaments for electrostatic bonding;
- Appellant claims its top layer being the high-loft open-pore web while Nemoto claims its top layer being a cushion of curved, tangled, filaments having vertical traveling voids;
- Appellant claims a cling enhancement substance that coats each fiber of the open porous high-loft web, which can then be pre-loaded with dry solid particulates of a water-soluble particle, such as, for example, baking soda, while Nemoto fails to disclose any external particles coating to its filaments and uses only the electrostatic mixture of resinous material and powdered electrical conductive material; and,

- Similarly, because Nemoto fails to disclose a sticky cling enhancement substance, it cannot and does not teach the Appellant's invention of a web having its fibers preloaded with dry, active particulates (that can further dissolve in water, for example).

For the seven distinctions articulated in the foregoing bullets, Appellant submits that Nemoto be removed as an anticipatory reference. The Nemoto reference teaches a different structure, a different method of use and field of use, and lacks any coating of activated particulates whatsoever.

Appellant respectfully requests that the Board reverse this rejection and remove Nemoto as an anticipatory reference.

Respectfully Submitted,

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CLAIMS APPENDIX

The claims on appeal are as follows:

1. A nonabsorbent particle entrapment pad comprising:

a bonded high loft, non-absorbent nonwoven top layer, said high loft nonwoven being defined as an open pore matrix or web of fibers attached to a barrier bottom layer;

wherein said bonded high loft nonwoven top layer is adapted such that the internal pores, and interstices, when receives collected externally applied fine to coarse solid particles the web of fibers thereby entraps, and retains collected particles, said base barrier bottom layer maintains said collected particles within said entrapment pad.

2. The pad of claim 1, further comprising an externally applied, cling enhancing substance placed or applied within at least a portion of said fibers within said matrix or web, wherein cling enhancing substance enhances the ability of the matrix fibers to mechanically cling on to the solid particulates.

3. The pad of claim 2 wherein said cling enhancing substance places or applied on the fibers is purposely preloaded with dry solid particles that are soluble in water ,or react with water when wetted.

4. The pad of claim 3, wherein said dry reactive particles are selected from the group comprising: baking soda; dry or powdered particulates; anti-microbial agent; superabsorbent polymer; disinfectant; silica get; antifungal; fragrance; and odor-counteractive agent.

7. (Withdrawn) The pad of claim 1, further comprising a liquid-absorbing middle layer.

8. (Withdrawn) The pad of claim 7, wherein said middle layer is wood pulp.

9. (Withdrawn) The pad of claim 7, wherein said middle layer is a super absorbent polymer.

10. (Withdrawn) The pad of claim 7, wherein said middle layer is treated with baking soda.

11. (Withdrawn) The pad of claim 10, further comprising a super absorbent polymer.

12. (Withdrawn) The pad of claim 7, wherein said middle layer is treated with an anti-microbial agent.

13. (Withdrawn) The pad of claim 7, wherein said middle layer is treated with an odor-counteractive agent.

14. (Withdrawn) The pad of claim 8, wherein said wood pulp is treated with a super absorbent polymer.

15. (Withdrawn) The pad of claim 7, wherein said top layer is treated with a cling enhancing substance.

16. (Withdrawn) The pad of claim 7, wherein said top layer is treated with baking soda.

17. (Withdrawn) The pad of claim 7, wherein said top layer is treated with an anti-microbial agent.

18. (Withdrawn) The pad of claim 7, wherein said top layer is treated with an odor-counteractive agent.

19. (Withdrawn) The pad of claim 7, wherein said pad includes a decorative design.

20. The pad of claim 1, wherein said collected particles are selected from the group comprising: cat litter; workshop debris, dust; and pet food.

21. (Withdrawn) The pad of claim 7, wherein said pad is used as a dish-draining mat.

22. (Withdrawn) The pad of claim 7, wherein said pad is used as a doormat.

23. (Withdrawn) The pad of claim 25, wherein said doormat is a runner.

24. (Withdrawn) The pad of claim 7, wherein said pad is used as a car floor mat.

25. (Withdrawn) The pad of claim 7, wherein said pad is used as a bathroom mat.

26. (Withdrawn) The pad of claim 7, wherein said pad is used under countertop soap dishes and dispensers.

27. (Withdrawn) The pad of claim 7, wherein said pad is used to line garbage receptacles.

28. (Withdrawn) The pad of claim 7, wherein said pad is used to catch excess water and soil under potted plants.

32. (Withdrawn) The pad of claim 7, wherein said pad is used in the vicinity of a pet food or pet water dish.

33. (Presented) The pad of claim 4, wherein said baking soda absorbs odors in a refrigerator.

34. (Withdrawn) The pad of claim 9, further comprising baking soda, wherein said pad is used to absorb odors and excess moisture.

35. (Withdrawn) The pad of claim 7 wherein said middle layer is mostly silica gel.

37. (Withdrawn) The pad of claim 36, further comprising a liquid-absorbing middle layer.

38. (Withdrawn) The pad of claim 36, wherein said middle layer is wood pulp.

39. (Withdrawn) The pad of claim 36, wherein said middle layer is a super absorbent polymer.

40. (Withdrawn) The pad of claim 38, wherein said wood pulp is treated with a super absorbent polymer.

43. (Withdrawn) The pad of claim 36, wherein said middle layer is treated with baking soda.

44. (Withdrawn) The pad of claim 43, wherein said middle layer is treated with a super absorbent polymer.

46. (Withdrawn) The pad of claim 36, wherein said middle layer is treated with an anti-microbial agent.

48. (Withdrawn) The pad of claim 36, wherein said middle layer is treated with an odor-counteractive agent.

49. (Withdrawn) An anti-odor pouch comprising:

a non-woven front layer;

a non-woven back layer attached to said non-woven front layer; and

a middle layer of baking soda layered between said front and back layer.

50. (Withdrawn) The anti-odor pouch of claim 49 wherein said middle layer includes a non-woven treated with baking soda.

51. (Withdrawn) The anti-odor pouch of claim 49, wherein said pouch is used to deodorize a refrigerator.

52. (Withdrawn) The anti-odor pouch of claim 49, wherein said middle layer further comprises silica gel.

53. (Withdrawn) The anti-odor pouch of claim 52, further comprising a super absorbent polymer.

54. (Withdrawn) The anti-odor pouch of claim 52, wherein said pouch is used to deodorize and dehumidify a refrigerator.

55. (Withdrawn) A method of entrapping particles comprising:

layering a high loft non-woven top layer, having an upper end and a lower end, on top of an impervious bottom layer to create a two-layer pad;

attaching said lower end of said top layer to said bottom layer; and

placing said pad, top layer up, upon a surface where particles will fall;

wherein, when said particles fall upon said non-woven top layer said particles become trapped within a matrix of said non-woven top layer;

wherein, fine particles fall to said lower end of said top layer;

wherein, coarse particles are suspended within said matrix; and

wherein, said pad can be easily disposed of without spilling said particles.

56. (Withdrawn) The method of claim 55, wherein said pad is used to entrap litter particles.

57. (Withdrawn) The method of claim 55, wherein said pad is used to entrap carbon particles.

58. (Withdrawn) The method of claim 55, wherein said pad is used to entrap dust particles.

59. (Withdrawn) The method of claim 55, wherein said pad is used to entrap soil.

60. (Withdrawn) The method of claim 55, wherein said pad is used to entrap food particles.

61. (Withdrawn) A method of entrapping particles while absorbing liquid

comprising:

layering a high loft non-woven top layer, having an upper end and a lower end, on top of a liquid-absorbing middle layer that is layered upon an impervious bottom layer to create a three-layer pad;

attaching said lower end of said top layer to said middle layer;

attaching said middle layer to said bottom layer; and

placing said pad, top layer up, upon a surface where particles and liquid will fall;

wherein, when said particles fall upon said non-woven top layer said particles become trapped within a matrix of said non-woven top layer;

wherein, fine particles fall to said lower end of said top layer;

wherein, coarse particles are suspended within said matrix;

wherein, when liquid falls upon said non-woven top layer, said liquid passes through said top layer and is absorbed by said middle layer; and

wherein, said pad can be easily disposed of without spilling said particles and said liquid.

62. (Withdrawn) The method of claim 61 wherein said middle layer includes baking soda.

63. (Withdrawn) The method of claim 62 wherein said middle layer includes a super absorbent polymer.

64. (Withdrawn) The method of claim 61, wherein said pad is used to entrap water.

65. (Withdrawn) The method of claim 61, wherein said pad is used to entrap urine.

66. (Withdrawn) The method of claim 61, wherein said pad is used to entrap litter particles.

67. (Withdrawn) The method of claim 61, wherein said pad is used to entrap food particles.

68. (Withdrawn) The method of claim 61, wherein said pad is used to entrap soil.

69. (Withdrawn) The pad of claim 1, further comprising a means for attaching said pad to another surface.

70. The pad of claim 2 wherein said cling enhancing substance is a sticky substance.

71. (Withdrawn) A particle entrapment pad comprising:

a high loft, non absorbent nonwoven top layer treated with a cling enhancing substance to receive and trap particles, said high loft nonwoven being defined as a matrix formed of fibers or filaments randomly oriented and fused at intersecting points of said fibers or filaments and secured to an impervious bottom layer to maintain said particles within said entrapment pad,

wherein said high loft non-woven top layer receives and entraps particles and said bottom layer is impervious to said particles.

72. (Withdrawn) The pad of claim 71 wherein said top layer is treated with a dry particulate- substance selected from the group comprising: baking soda; superabsorbent polymer; antimicrobial agent; commercially available tacky material; silica; fragrance; calcium carbonate; fragrance; and odor counteractive agent.

75. (Withdrawn) A particle entrapment pad comprising:

a high loft, non-woven top layer, said high loft non-woven being defined as a matrix formed of synthetic fibers or filaments randomly oriented and fused at intersecting points of said fibers or filaments, forming an open porous structural web or matrix, capable to receive and trap particles and secured to a bottom layer to maintain said particles within said entrapment pad;

said top layer being treated with a cling enhancing substance applied or placed within the web; and

said high loft nonwoven top layer is treated with at least one additional dry, solid particulate, agent.

77. (Withdrawn) The pad of claim 75 wherein said cling enhancing substance can contact a particle, entrapping or clinging to it mechanically without forming a chemical reaction or forming chemical bonds between said particle and said cling-enhancing substance.

78. (Withdrawn) The pad of Claim 75, wherein said additional dry particulate agent is selected from the group comprising: baking soda; antimicrobial agent; at least one superabsorbent polymer; fragrance; an odor counteractive agent;.

82. (Withdrawn) A particle entrapment pad comprising an impervious bottom layer and a high loft non-woven top layer, wherein said high loft non-woven top layer includes a cling enhancing substance within a matrix of said non-woven that is sticky and can cling to dry particulates without entering into a chemical reaction with those particulates and is chemically inert while clinging to the particulates. -

83. (Withdrawn) The pad of Claim 82, further comprising:

dry particles preloaded to said cling enhancing substance.

84. (Withdrawn) The pad of Claim 83, wherein said reactive particles are chemically reactive when solubilized in a liquid.

85. (Withdrawn) The pad of Claim 83, wherein said reactive particles are selected from the group comprising: substance selected from the group comprising: baking soda; dry or powdered particulates; anti-microbial agent; superabsorbent polymer; disinfectant; silica get; antifungal; fragrance; and odor-counteractive agent.

91. (Withdrawn) An absorbent particle entrapment pad comprising:

a high loft, non-absorbent nonwoven top layer, said high loft nonwoven being defined as

an open pore matrix or web of fibers attached to an impervious bottom layer; and

a cling enhancing substance applied to a least a portion of said fibers; and

superabsorbent polymer affixed to said cling-enhancing substance;

wherein said superabsorbent polymer clinging to said fibers allow said non-absorbent nonwoven top layer to emulate absorbency when wetted.

92. (Previously Presented) The pad of claim 2 , where the cling enhancing substance is placed or applied within the matrix and the fibers of the bonded, web, highloft matrix so that a Sticky, residue, remains. that can mechanically entrap solid particulates that come in contact with the sticky substance.

93. (Previously Presented) The Cling agent of claim 92 whereby the sticky, tacky, residue remaining on the inert fibers of the matrix mechanically adheres to entering particulates within the web to hold them and does not chemically react with these particulates such as by creating chemical bonds.

94. (Previously Presented) The cling agent of Claim 92 where the sticky, mechanical entrapment of the entering particulates holds dry particulates of Superabsorbent polymers, Baking Soda, Fragrances and odor counteractants, disinfectants., fungicides.

95. (Withdrawn) The pad of Claim 83, wherein said reactive particles are chemically reactive when exposed to a Gas such as Air.

EVIDENCE APPENDIX

1. http://www.inda.org/category/nwn_index.html This is the website of The Association of the Nonwoven Fabrics Industry and provides a term-of-art definition for 'nonwoven'

2. INDA Nonwoven Fabric sampler booklet

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About Nonwovens

Nonwoven fabrics are broadly defined as sheet or web structures bonded together by entangling fiber or filaments (and by perforating films) mechanically, thermally or chemically. They are flat, porous sheets that are made directly from separate fibers or from molten plastic or plastic film. They are not made by weaving or knitting and do not require converting the fibers to yarn.

Nonwoven fabrics are engineered fabrics that may be a limited life, single-use fabric or a very durable fabric. Nonwoven fabrics provide specific functions such as absorbency, liquid repellency, resilience, stretch, softness, strength, flame retardancy, washability, cushioning, filtering, bacterial barrier and sterility. These properties are often combined to create fabrics suited for specific jobs, while achieving a good balance between product use-life and cost. They can mimic the appearance, texture and strength of a woven fabric and can be as bulky as the thickest paddings. In combination with other materials they provide a spectrum of products with diverse properties, and are used alone or as components of apparel, home furnishings, health care, engineering, industrial and consumer goods.

Listed below are some of the more familiar products made with nonwovens:

- disposable diapers
- sanitary napkins & tampons
- sterile wraps, caps, gowns, masks and drapings used in the medical field
- household and personal wipes
- laundry aids (fabric dryer-sheets)
- apparel interlining
- carpeting and upholstery fabrics, padding and backing
- wall coverings
- agricultural coverings and seed strips
- automotive headliners and upholstery
- filters
- envelopes
- tags
- labels
- insulation
- house wraps
- roofing products
- civil engineering fabrics/geotextiles

As you can see, there are many uses for nonwoven fabrics. Technology and ingenuity are creating the capability of these fabrics to provide high quality and functional products.

Frequently Asked Questions about Nonwovens
About INDA
Industry Related Links
Academic Research Facilities
Consultants Network

Benefits of Non-wovens (End use examples)

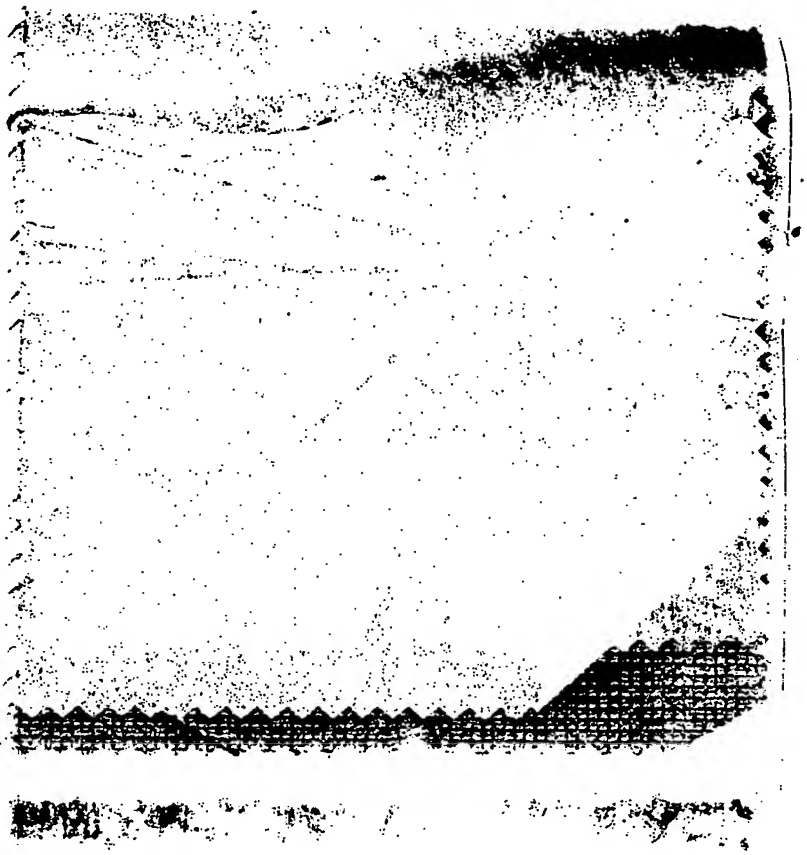
Air Filtration	Air Filters For The Home
Automotives	Engineered Nonwoven Fabrics in Automotives
Home Furnishings	Home Furnishings and Bedding
Healthcare	Healthcare Waste Management
Wipers	The Industrial Wiper Advantage

Phone (919)233-1210 Fax (919)233-1282
PO Box 1288 Cary, NC 27512-1288
1100 Crescent Green, Suite 115, Cary, NC 27518
Directions

Association of the
Nonwoven Fabrics Industry

1700 BROADWAY, NEW YORK, N.Y. 10019 (212) 582-8401

NONWOVEN FABRIC SAMPLER



Dry Formed UNIDIRECTIONAL

Dry Formed ISOTROPIC

Wet Formed

Needlepunched

Spunbonded

Spunlaced

Film Extruded

Melt Blown

Composite

Thermal Bonded

Hi Loft

DRY FORMED (Unidirectional) Fibers are laid in a parallel configuration and are uniformly distributed by mechanical means to form a moving web. Fiber bonding is achieved by adhesive binders or heat fusion. The fiber lay and fabric strength are predominantly in the machine direction.

DRY FORMED (Isotropic) Fibers are formed from an airstream with a completely random configuration of the web. Adhesive binders, heat fusion, or mechanical entanglement are used. Machine and cross direction strengths are nearly equal.

WET FORMED Fibers are suspended in water and formed into a web on a moving screen. Fiber bonding may be achieved by drying, adhesives, or by heat fusion.

NEEDLEPUNCHED Dry formed staple fiber or continuous filament melt spun webs are bonded by mechanical entanglement of the fibers, achieved by punching through the web with thousands of barbed needles. Bulk, soft, strong fabrics are obtained.

SPUNBONDED Various molten polymers are forced through spinnerets and the resulting continuous filaments laid on a moving belt to form a web. Bonding is achieved by heat fusion and/or mechanical entanglement. Process can be applied to different polymers.

Dry Formed UNIDIRECTIONAL

SPUNLACED Staple fibers webs are bonded mechanically entangling the fibers, using high velocity water jets. Soft drapable fabrics are obtained.

Dry Formed ISOTROPIC

FILM EXTRUDED Molten polymer is extruded through a flat film die and embossed with a geometric pattern. Subsequent biaxial orientation gives an open network structure of connected oriented fibers.

Wet Formed

MELT BLOWN Molten polymer is forced through a spinneret into a high velocity air stream. The resulting fibers are collected in web form on a moving belt. Fiber entanglement and some thermal bonding is obtained directly in the web forming operation.

Needlepunched

Spunbonded

COMPOSITE Nonwoven fabrics may be laminated to a plastic film or combined with a scrim to take advantage of certain properties of each component.

Spunlaced

Film Extruded

THERMAL BONDED Fibers are laid in a parallel configuration and are uniformly distributed by mechanical means to form a moving web. Fiber bonding is achieved by heat fusion. The fiber lay and fabric strength are predominantly in the machine direction.

Melt Blown

Composite

HI LOFT The webs are formed by isotropic or unidirectional or by cross laying techniques. The most common method of bonding is by latex spraying or most recently thermal bonding.

Thermal Bonded

Hi Loft

Dry Formed UNIDIRECTIONAL

Dry Formed ISOTROPIC

Wet Formed

Needlepunched

Spunbonded

Spunlaced

Film Extruded

Melt Blown

Composite

Thermal Bonded

Hi Loft

DRY FORMED (Unidirectional) Fibers are laid in a parallel configuration and are uniformly distributed by mechanical means to form a moving web. Fiber bonding is achieved by adhesive binders or heat fusion. The fiber lay and fabric strength are predominantly in the machine direction.

DRY FORMED (Isotropic) Fibers are formed from an airstream with a completely random configuration of the web. Adhesive binders, heat fusion, or mechanical entanglement are used. Machine and cross direction strengths are nearly equal.

WET FORMED Fibers are suspended in water and formed into a web on a moving screen. Fiber bonding may be achieved by drying, adhesives, or by heat fusion.

NEEDLEPUNCHED Dry formed staple fiber or continuous filament melt spun webs are bonded by mechanical entanglement of the fibers, achieved by punching through the web with thousands of barbed needles, Bulk, soft, strong fabrics are obtained.

SPUNBONDED Various molten polymers are forced through spinnerets and the resulting continuous filaments laid on a moving belt to form a web. Bonding is achieved by heat fusion and/or mechanical entanglement. Process can be applied to different polymers.

SPUNLACED Staple fibers webs are bonded mechanically entangling the fibers, using high velocity water jets. Soft drapable fabrics are obtained.

FILM EXTRUDED Molten polymer is extruded through a flat film die and embossed with a geometric pattern. Subsequent biaxial orientation gives an open network structure of connected oriented fibers.

MELT BLOWN Molten polymer is forced through a spinneret into a high velocity air stream. The resulting fibers are collected in web form on a moving belt. Fiber entanglement and some thermal bonding is obtained directly in the web forming operation.

COMPOSITE Nonwoven fabrics may be laminated to a plastic film or combined with a scrim to take advantage of certain properties of each component.

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HI LOFT The webs are formed by isotropic or unidirectional or by cross laying techniques. The most common method of bonding is by latex spraying or most recently thermal bonding.

BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Pat YANANTON	)	Date:	January 4, 2007
Serial No.: 10/033,862	)	Group Art Unit:	3644
Filed: 12/20/2001	)	Examiner:	Richard PRICE
Title: Absorbent Pad for Entrapping Fine and Coarse Particles, Retaining Liquids, and Eliminating Odors	)		

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on 1-8-07 (date).

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TERRY LAKOS

Signature Terry Lakos

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TERRY LAKOS

Signature Terry Lakos

Hon. Commissioner of Patents and Trademarks
Alexandria, VA 22313-1450

DECLARATION OF GARY G. ORTON UNDER 37 C.F.R. 1.132

Now comes declarant and states and declares the following:

1. I am currently the Plant Manager for the Felters Group in Gaffney, South Carolina with responsibility for all operatics of a Needlepunch Nonwovens plant

2. That I also have other experience as shown in the attached Curriculum Vitae, which is referenced as if fully restated herein.

3. That I am familiar with the invention described in the Butterworth et al. patent, and have reviewed and understand the present invention.

4. I feel that there are significant differences in the problems being attacked by the present invention, and those attacked by the Butterworth invention. In my opinion, the Butterworth patent and the present patent application use a similar process in the formation of an airlaid bat, but the finished product, the process of achieving the finished product and the application of the finished product are completely different.

5. The combination of high loft fibers, particle entrapping tackifiers, and backing would not be considered "ordinary skill in the art". The Butterworth structure could not be used to attain the functionality as described by the present invention.

6. I feel that these functional differences are major and significant, such as to make the Butterworth device completely different art from the present invention.

7. In addition, there are many other functional and structural difference between the present invention and that described in Butterworth; particularly: cling agent charged into preformed web; reactive particles attached to cling agent; and reactive particles loaded into web; and additional agents loaded into web. Additionally, many other differences exist as well.

8. I feel the present invention embodies non-obvious differences over anything currently described or claimed in the Butterworth patent.

9. I feel the present invention embodies non-obvious differences over anything currently offered within the industry or anything currently described or claimed in the

Utility Patent
Ser. No 10/033,862

Butterworth patent.

FURTHER DECLARANT SAITH NAUGHT.

Gary G. Orton

GARY G. ORTON
12021 Lake Ridge Lane
Seneca, South Carolina 29672
864-885-9745

Summary of Experience

More than fifteen (15) years experience in manufacturing and military service with emphasis on management and leadership. Extensive background in budget development and administration, cost reduction, throughput improvement, JIT, statistical process control, GMP's, ISO certification, safety, project management and team development.

1996 to Present — **Kendall Healthcare Products Company**, Seneca, South Carolina.
A 640-employee facility producing healthcare products and medical devices.

Production Manager: Responsible to Plant Manager for control of all aspects of the production process for 7 major product lines. Managed a budget of over $40,000,000 and supervised 3 area superintendents with 18 supervisors and 550 hourly employees.

- Implemented programs to reduce costs including waste reduction improvement teams, process changes and automation. Net Result: Decreased costs by 12% from $51,740,677 to $46,249,805 while supporting a 4% increase in volume.
- Worked as a key member of a team that achieved ISO 9002 and EN 46002 certification in less than one (1) year.
- Identified bottlenecks and implemented process changes to improve throughput. Net Result: Decreased plant back order standing from $548,000 to under $50,000 in one (1) year.
- Strengthened plant safety program through increased employee involvement and expanding safety investigations to include near misses. Net Result: Achieved a below-industry average accident frequency rate of 1.3 accidents per 200,000 man-hours and no lost time accidents.

1992 to 1996 — **Aesculap, Incorporated**, South San Francisco, California.
A 350-employee facility producing and distributing precision surgical instrumentation.

Manufacturing Manager: Responsible to the President for managing company's national instrument repair service and start up of a local manufacturing facility for surgical instruments. Managed staff of 6 exempt and 35 non-exempt employees, and an operating budget of $4,100,000.

- Designed and implemented a corrective action program for repair quality. Net Result: Decreased customer complaints by 50%.
- Developed and implemented a cross training program and reorganized the repair process. Net Result: Decreased operating expenses by 12% while supporting a 28% increase in revenue.
- Directed the start up of a manufacturing department to include machinery, facilities and production control.

1990 to 1992 — **Corus Medical Corporation**, Sunnyvale, California.
A 250-employee facility processing and distributing blood and components to hospitals.

Director of Operations: Responsible to the Vice President of Operations for managing a start up commercial and manufacturing venture with 10 satellite offices and 80 employees in the areas of materials, nursing, laboratory, customer service and distribution. Administered an annual operating budget of $5,500,000.

- Established a strong management team and improved manpower utilization. Net Result: Decreased costs by 8% or $520,000 annually and turned around an operation losing $310,000 annually to break even within one (1) year.
- Implemented a comprehensive quality assurance program to decrease administrative and operational errors. Net Result: Decreased customer complaints by 28%.
- Scheduled, processed and distributed 26,000 components annually.

1986 to 1990 — **McGaw Incorporated**, Irvine, California.
An 800-employee facility producing pharmaceutical products.

1988 to 1990 — **Manufacturing Superintendent**: Responsible to the Production Manager for managing 5 exempt supervisors and 60 employees in the start up of 5 new product lines which produced 24,000,000 units annually under strict compliance to FDA and OSHA regulations. Control included budget preparation, implementing initial maintenance program, creating and implementing material usage tracking and labor reporting systems, hiring production and technical personnel, and developing on-going process improvement programs.

1987 to 1988 — **Technical Supervisor**, Responsible to Superintendent for scheduling, budget preparation, maintenance support and overall production output for department. Supervised a Blow Molding operation with 60 employees and 10 Beckum blow molding machines.

- Implemented statistical process control, JIT and a tool control program. Net Result: Decreased material waste by $130,000 per month, increased shift efficiency by 9% and maintained the highest release rate in the department.
- Promoted to Manufacturing Superintendent.

1986 to 1987 — **Production Supervisor**: Responsible to Superintendent for scheduling, budget preparation, maintenance support, robotics application and overall production output of a manufacturing line with 30 employees.

- Streamlined the process, trained and motivated team. Net Result: Increased department efficiency by 5% and decreased reject rate by 10%.
- Promoted to Technical Supervisor.

1981 to 1986 — **United States Army**
A branch of the United States Military Service.

1985 to 1986 — **Intelligence and Security Officer**, Korea: Responsible to Battalion Operations Officer for compound security of a 500-man battalion utilizing 9 Intelligence personnel, a 13-man unit police detachment and a 45-man Korean security guard force.

- Increased training status and efficiency of unit personnel by developing 4 comprehensive programs in areas of Nuclear Surety and Security. Net Result: Turned an operation that failed a Nuclear Surety Inspection into one that received a "No Observations" inspection within one (1) year.

1984 to 1985 — Operations Officer, Fort Lewis, Washington: Responsible to Battalion Operations Officer for Planning, coordinating and executing all major operations for a 500-man battalion including field operations and air lifts.

1981 to 1984 — Junior Officer, Fort Lewis, Washington: Responsible to Battery Commander while serving as a Junior Officer in the Field Artillery. Positions held included Survey Officer, Fire Direction Officer, Personnel Officer and Battery Executive Officer.

- Received the Division Outstanding Junior Officer Award; Division Artillery Personnel Administration Center Award; and Division Quarterly Maintenance Award.

EDUCATION

Bachelor of Science Degree with concentration in Civil Engineering, United States Military Academy, West Point, New York, 1981.

SEMINARS

Leadership 2000, 1996.
Process Validation, 1995.
Statistical Process Control, 1990.
Schonberger's World Class Manufacturing Principles, 1990.
Total Quality Management based on Deming's Fourteen Points, 1990.

EVIDENCE APPENDIX

1. http://www.inda.org/category/nwn_index.html This is the website of The Association of the Nonwoven Fabrics Industry and provides a term-of-art definition for 'nonwoven'

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RELATED PROCEEDINGS APPENDIX

There are currently no decisions rendered for is pending appeal of U.S. Serial No. 10/269713 and U.S. Serial No. 11/169738.

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